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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,593	10/06/2003	Deshanand Singh	ALT.P024	5948

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EXAMINER	
TAT, BINH C	
ART UNIT	PAPER NUMBER
2825	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/679,593	Applicant(s) SINGH ET AL.	
	Examiner Binh C. Tat	Art Unit 2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 16 October 2006.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-36 is/are pending in the application.

4a) Of the above claim(s) 10-25 is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-9 and 26-36 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 06 October 2003 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to application 10/679593 file on 10/06/03. The examiner acknowledges: the election of group I, claims 1-9 without traverse. The withdraw of non-election claims 10-25, and add new claims 26-36.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-9, and 26-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Arnold Ginetti (US Patent 5396435).

2. As to claims 1, 26 and 35 Arnold Ginetti teaches a method for designing a system on a target device utilizing field programmable gate arrays (FPGA), comprising: identifying a group of components associated with a critical signal in the system (see fig 3a, 3b, col 3 line 40 to col 4 line 15, and abtraction); creating a first copy and a second copy of the group of components where the first copy is driven by a first signal at a first state and the second copy is driven by a second signal at a second state (see fig 3a-3c, fig 4 and fig 6a-6c col 3 line 45 to col 8 line 42); and configuring the system to select an output of one of the first copy and the second copy in response to the critical signal (see fig 3a-3c, fig 4, fig 6a-6c col 7 line 4 to col 8 line 68).

3. As to claim 2, and 27 Arnold Ginetti teaches wherein identifying the group of components associated with the critical signal in the system comprises determining a transitive fanout for the critical signal (see fig 3a-3c, fig 4 col 7 line 28 to col 8 line 42).

4. As to claim 3, and 28 Arnold Ginetti teaches wherein determining the transitive fanout for the critical signal comprises identifying the transitive fanout within a maximum number of logic levels (see fig 3a-3c, fig 4 col 7 line 28 to col 8 line 42).

5. As to claim 4, and 29 Arnold Ginetti teaches further comprising: identifying side inputs to the transitive fanout (see fig 3a-3c, fig 4, fig 6a-6c col 7 line 4 to col 8 line 68); and determining whether the side inputs have sufficient slack (see fig 3a-3c, fig 4, fig 6a-6c col 7 line 4 to col 8 line 68).

6. As to claim 5 and 30 Arnold Ginetti teaches further comprising providing connections from side inputs in the system to components in each of the first copy and second copy (see fig 3a-3c, fig 4 and fig 6a-6c col 3 line 45 to col 8 line 42).

7. As to claim 6, and 31 Arnold Ginetti teaches further comprising removing unused components from the group of components (see fig 3a-3c col 8 line 13-55, and background).

8. As to claim 7 and 32 Arnold Ginetti teaches further comprising determining the critical signal by performing a critical path traceback procedure (see fig 3a-3c, and fig 4 col 7 line 3 to col 8 line 27).

9. As to claim 8, 33, and 36 Arnold Ginetti teaches further comprising determining appropriate placement of the first copy and the second copy on the target device using an incremental placement technique (see fig 3a-3c, fig 4 and fig 6a-6c col 3 line 45 to col 8 line 42).

10. As to claim 9 and 34 Arnold Ginetti teaches further comprising: determining a transitive fanout for a signal identified as being next most critical for the system (see fig 3a-3c, fig 4 col 7 line 28 to col 8 line 42); creating a first copy and second copy of a group of components associated with the transtive fanout for the signal identified as being next most critical for the system (see fig 3a-3c, fig 4 and fig 6a-6c col 3 line 45 to col 8 line 42); and configuring the system to select an output of one of the first copy and the second copy of the group of components associated with the transitive fanout in response to the signal identified as being next most critical for the system (see fig 3a-3c, fig 4, fig 6a-6c col 7 line 4 to col 8 line 68).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh C. Tat whose telephone number is 571 272-1908. The examiner can normally be reached on 7:30 - 4:00 (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on 571 272-7483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Binh Tat
Art unit 2825
January 6, 2007

1/07/07
THUAN V. DO
PRIMARY PATENT EXAMINER